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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,561	12/18/2001	Seppo Rousu	872.0106.U1(US)	2675
29683	7590	11/15/2004	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			NGUYEN, DAVID Q	
			ART UNIT	PAPER NUMBER
			2681	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,561

Applicant(s)

ROUSU, SEPPU

Examiner

David Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 08/06/04 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6,496,150 B1 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Trikha et al. (US 6,072,993).

Regarding claims 1 and 12, The admitted prior art shows and discloses a method for operating a multi-mode mobile station, wherein at least two modes operate within at least one common range of frequencies (see fig. 2 and page 1 line 28 to page 2, line 1), comprising: transmitting a signal from a first antenna circuit of the mobile station in the common range of frequencies (see fig. 2 and page 1 line 28 to page 2, line 1). The admitted prior art does not disclose a controller, responsive to a first one of said transmitter circuits transmitting, for electronically detuning a second antenna circuit of the mobile station such that the second antenna circuit is mis-matched to the first antenna circuit so as to reduce coupling of the

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transmitted signal from the first antenna circuit into the second antenna circuit. However, Trikha et al. discloses electronically detuning a second antenna circuit of the mobile station such that the second antenna circuit is mis-matched to the first antenna circuit so as to reduce coupling of the transmitted signal from the first antenna circuit into the second antenna circuit (see col. 2, lines 20-43 and fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teaching of Trikha et al. to the admitted prior art so that dual mode cellular phones operate in two or more overlapping frequency bands.

Regarding claims 2-3 and 13-14, The admitted prior art also shows wherein the common range of frequencies comprises 1900 MHz; the common range of frequencies comprises 850 MHz (see fig. 2 and page1 line 28 to page 2, line 1).

Regarding claims 4-9 and 15-20, the method of the admitted prior art in view of Trikha et al. also discloses and shows wherein the step of detuning comprises varying an impedance of at least one component that forms a part of the second antenna circuit; wherein the at least one component is comprised of a strip line; wherein the at least one component is comprised of a PIN diode; wherein the at least one component is comprised of a variable capacitance; wherein the at least one component is comprised of a FET diode; wherein the at least one component is comprised of an active component that is put into a passive state (see col. 2, lines 20-42 and fig. 1-4 and description of Trikha et al).

Regarding claims 10-11 and 21-22, the method of the admitted prior art in view of Trikha et al. also discloses and shows wherein the step of detuning comprises operating at least one switch for adding a length of strip line to, or for subtracting a length of strip line from, the

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second antenna circuit (see col. 2, lines 20-42 and fig. 1-4 and description of Trikha et al); wherein the step of detuning comprises operating at least one switch for connecting a length of strip line to ground, or for disconnecting a length of strip line from ground (see col. 2, lines 20-42 and fig. 1-4 and description of Trikha et al).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wantanabe et al. (US 6,633,748 B1), Composite high frequency component and mobile communication device including the same.

Tanaka et al. (US 2003/0008693 A1), Multiband high-frequency switch.

Sutton et al. (US 6,600,931 B2), Antenna switch assembly and associated method for a radio communication station.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Nguyen whose telephone number is 703-605-4254. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN

David Nguyen



DAVID HUDSPETH
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